FEDERAL SUPPLY CLASS
6145

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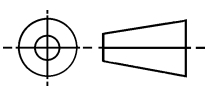
ISSUED 2001-07

THIRD ANGLE PROJECTION



PREPARED BY SAE SUBCOMMITTEE AE-8D

SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, EXTRUDED TFE, SILVER-COATED HIGH STRENGTH COPPER ALLOY CONDUCTOR, 600-VOLT

AS22759/22
SHEET 1 OF 4

Printed in the U.S.A.

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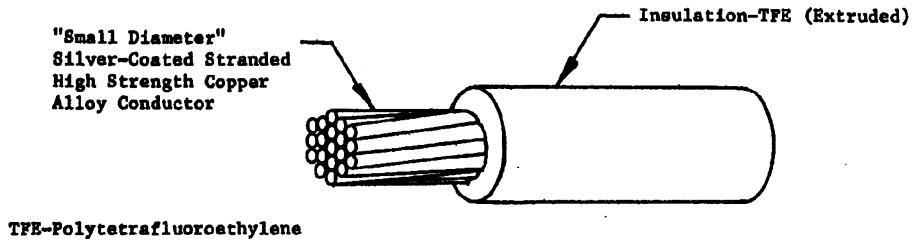
The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Specification MIL-W-22759.



TFE-Polytetrafluoroethylene

TABLE I. CONSTRUCTION DETAILS

Part No. 1/	Wire size	Stranding (Number of strands X AWG gage of strands)	Diameter of stranded conductor (inches)		Finished wire		
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/22-28-*	28	7 X 36	.014	0.015	74.4	.033 ±.002	1.32
M22759/22-26-*	26	19 X 38	.018	0.020	44.8	.038 ±.002	1.91
M22759/22-24-*	24	19 X 36	.023	0.024	28.4	.043 ±.002	2.61
M22759/22-22-*	22	19 X 34	.029	0.031	17.5	.049 ±.002	3.68
M22759/22-20-*	20	19 X 32	.037	0.039	10.7	.058 ±.002	5.38

1/ PART NO.: The asterisks in the part number column, Tables I and II, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/22-20-9; white with orange stripe - M22759/22-20-93.

TABLE II. PERFORMANCE DETAILS

Part No.	Abrasion resistance (Procedure II)				Bend testing			
					Mandrel diameter (inches) (±3%)		Test load (lbs) (±3%)	
	Resistance (inches of tape) (min) (initial condition)	Weight support bracket	Weight (lbs)	Tension load (lbs)	Life cycle (oven & bend tests) 1/	Cold bend test	Life cycle (oven & bend tests) 1/	Cold bend test
M22759/22-28-*	12	A	.50	1.0	.125	.250	.50	
M22759/22-26-*	18	A	.50	1.0	.125	.250	.50	
M22759/22-24-*	18	A	.50	1.0	.125	.250	.50	
M22759/22-22-*	24	A	.50	1.0	.250	.375	.75	
M22759/22-20-*	24	A	.50	1.0	.250	.375	.75	

1/ Also for bend tests after immersion.

WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

ABRASION RESISTANCE AFTER IMMERSION: No requirement

ACID RESISTANCE: Dielectric test, 3000 volts (rms), 60 Hz

BLOCKING: 260 ±2°C (500 ±3.6°F)

COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight

DIELECTRIC TEST AFTER IMMERSION: 3000 volts (rms), 60 Hz

FLAMMABILITY: Post-flame dielectric test not required

HUMIDITY RESISTANCE: No requirement

IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight

IMPULSE DIELECTRIC TEST: 8.0 kilovolts (peak), 100% test

INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min)

LIFE CYCLE:
Oven temperature, 275 ±2°C (527 ±3.6°F)
Dielectric test, 3000 volts (rms), 60 Hz

LOW TEMPERATURE (COLD BEND):
Bend temperature: -65 ±2°C (-85 ±3.6°F)
Dielectric test, 3000 volts (rms), 60 Hz

SHRINKAGE: 0.03 inch max at 290 ±2°C (554 ±3.6°F)

SMOKE: 290°C (554°F)

SPARK TEST OF PRIMARY INSULATION: Not required

SURFACE RESISTANCE: 500 megohm-inches (min), initial and final readings

THERMAL SHOCK:
Oven temperature, 200 ±2°C (392 ±3.6°F)
Max change in measurement, 0.060 inch

WICKING: No requirement

WIRE LENGTH REQUIREMENTS: Schedule A

WRAP TEST:
"Wrap back" test required; no cracking
Oven temperature, 313 ±2°C (595.4 ±3.6°F)

Conductor strand adhesion requirements shall be in accordance with 3.6.11 of MIL-W-22759.